Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled data based on original data using

LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

Brand: McGRAW-EDISON

Report Number: P642937

Luminaire Tested: GWS-SA6D-830-U-SLL-W

Issue Date: 1/10/2023

Report Generated By 670246102 / DESKTOP-G35701P

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Peachtree City, GA 30269

Scaled Data Report

**Test Information**

| | |
|---|---|
| Test Method: | LM-79-2019 |
| Report Number: | P642937 |
| | TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-37) |
| Test Lab: | COOPER LIGHTING SOLUTIONS |
| Issue Date: | 1/10/2023 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS |
| Product Line: | McGRAW-EDISON |
| Catalog Number: | GWS-SA6D-830-U-SLL-W |
| Description: | GALLEON WALL SLIM LUMINAIRE. (6) LIGHTSQUARES WITH 16 LEDS EACH AND SPILL LIGHT ELIMINATOR LEFT OPTICS |
| Light Source: | (96) 3000K CCT, 80 CRI LEDS |
| Ballast/Driver: | - |

**Summary**

| | |
|---|---|
| Lumens per Lamp: | N/A |
| Luminaire Lumens: | 26670.3 lumens |
| Efficiency: | N/A |
| Efficacy: | 108.5 lumens/watt |
| Luminous Opening: | Rectangular (W 2' x L: 1' x H: 0') |
| IES Classification: | Type III - Short |
| BUG Rating: | B3 - U0 - G4 |

| | |
|---|---|
| Input Watts (W): | 245.7 |
| Input Voltage (V): | 120 |
| Input Current (Ain): | NR |
| Voltage Rise (V): | NR |
| Power Factor: | NR |
| Total Harmonic Distortion (THDi): | NR |
| Frequency (hertz): | 0 |
| Stabilization Time: | NR |
| Operation Time: | NR |
| Ambient Temperature (°C): | NR |
| Test Distance: | 28.75 FT |

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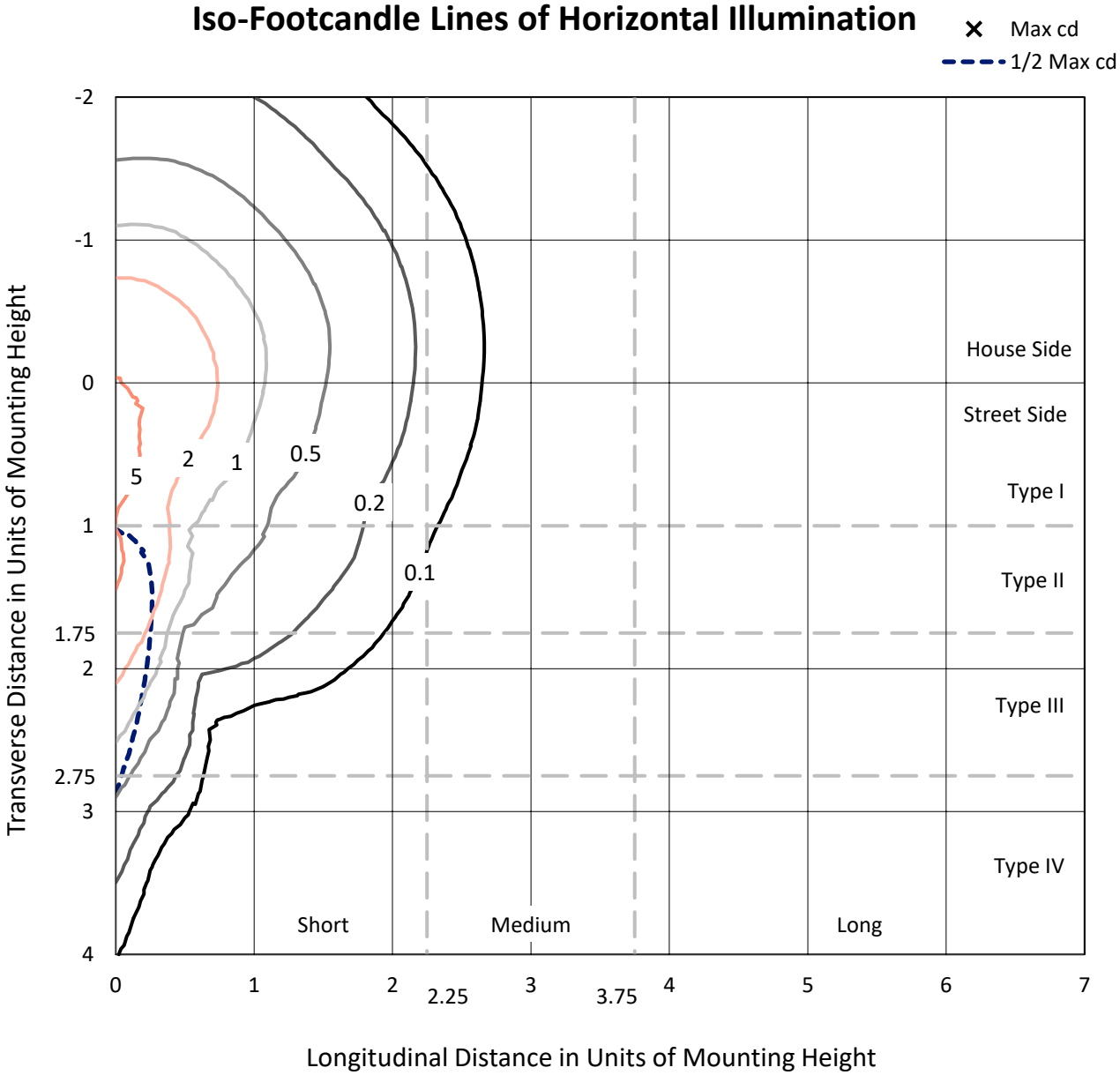
## Iso-Footcandle Lines of Horizontal Illumination




Based on 25 foot mounting height. Maximum calculated value = 7.1 fc
Type III - Short - N/A

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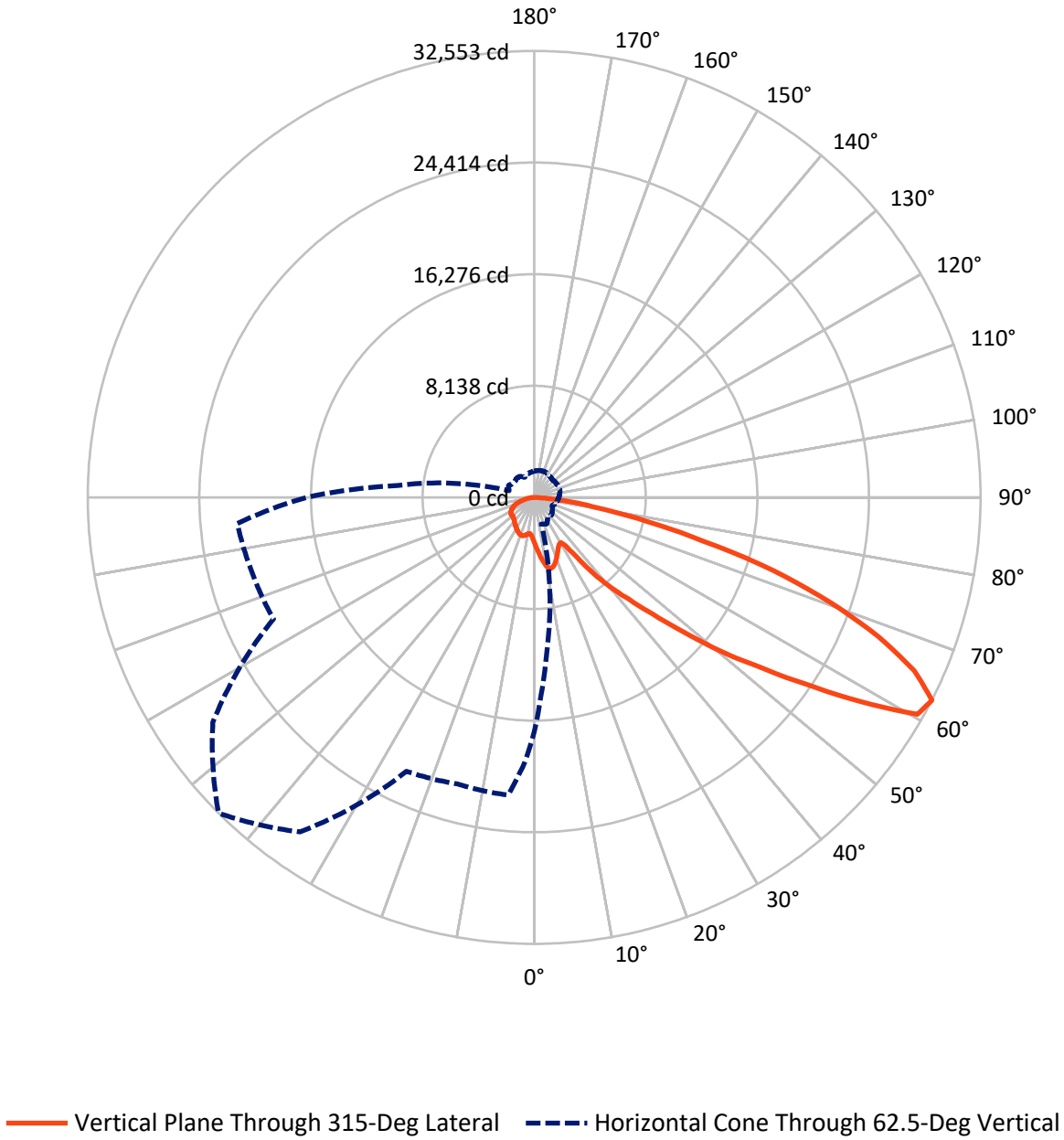
## Luminous Intensity Polar Plot



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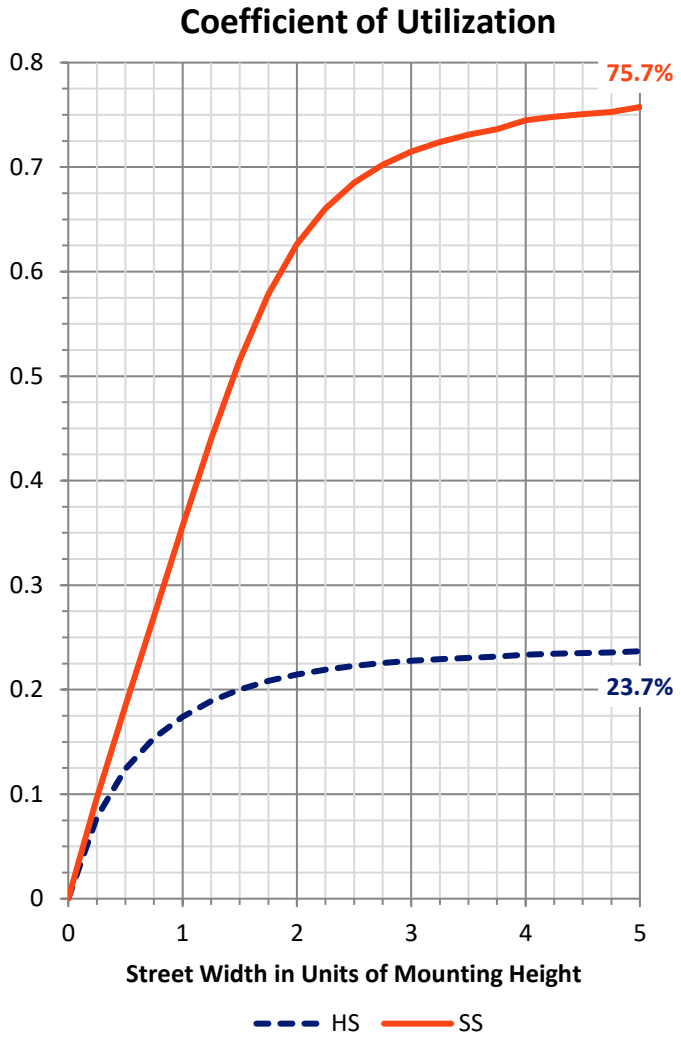
**FLUX DISTRIBUTION:**

| | | Downward | Upward | Total |
|---|---|---|---|---|
| **House Side** | Lumens | 6376.9 | 0.0 | 6376.9 |
| | % Fixture | 23.9 | 0.0 | 23.9 |
| **Street Side** | Lumens | 20293.4 | 0.0 | 20293.4 |
| | % Fixture | 76.1 | 0.0 | 76.1 |
| **Total** | Lumens | 26670.3 | 0.0 | 26670.3 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

**ZONAL LUMENS:**

| Zone | Lumens | % Fixture |
|---|---|---|
| 0°-10° | 327.6 | 1.2 |
| 10°-20° | 1064.7 | 4.0 |
| 20°-30° | 1676.0 | 6.3 |
| 30°-40° | 2297.3 | 8.6 |
| 40°-50° | 3584.5 | 13.4 |
| 50°-60° | 6180.3 | 23.2 |
| 60°-70° | 7162.2 | 26.9 |
| 70°-80° | 3780.6 | 14.2 |
| 80°-90° | 597.2 | 2.2 |
| 90°-100° | 0.0 | 0.0 |
| 100°-110° | 0.0 | 0.0 |
| 110°-120° | 0.0 | 0.0 |
| 120°-130° | 0.0 | 0.0 |
| 130°-140° | 0.0 | 0.0 |
| 140°-150° | 0.0 | 0.0 |
| 150°-160° | 0.0 | 0.0 |
| 160°-170° | 0.0 | 0.0 |
| 170°-180° | 0.0 | 0.0 |
| 0°-90° | 26670.3 | 100.0 |
| 0°-180° | 26670.3 | 100.0 |



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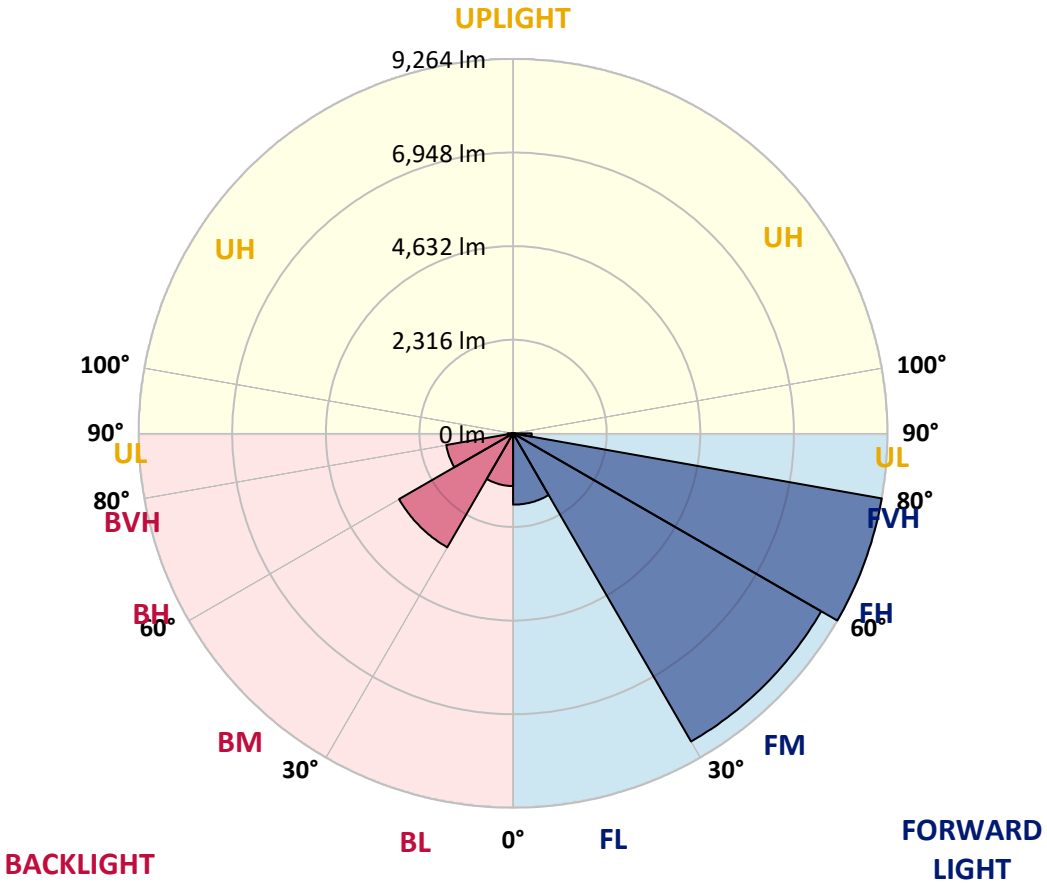
## LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit B | U | G |
|---|---|---|---|---|---|---|
| FL | (0°-30°) | 1763.9 | 6.6 | | | |
| FM | (30°-60°) | 8804.8 | 33.0 | | | |
| FH | (60°-80°) | 9263.7 | 34.7 | | | G4/12000 |
| FVH | (80°-90°) | 461.0 | 1.7 | | | G3/500 |
| BL | (0°-30°) | 1304.3 | 4.9 | B3/2500 | | |
| BM | (30°-60°) | 3257.3 | 12.2 | B3/5000 | | |
| BH | (60°-80°) | 1679.1 | 6.3 | B3/2500 | | G3/2500 |
| BVH | (80°-90°) | 136.2 | 0.5 | | | G2/225 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

**BUG Rating: B3-U0-G4**
Type III Short



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**CANDELA DISTRIBUTION (FULL):**

| | 0° | 2° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 85° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 3325.2 | 3325.2 | 3325.2 | 3325.2 | 3325.2 | 3325.2 | 3325.2 | 3325.2 | 3325.2 | 3325.2 | 3325.2 |
| 2.5° | 3612.9 | 3598.6 | 3578.2 | 3508.8 | 3466.0 | 3417.0 | 3366.0 | 3306.9 | 3239.6 | 3192.6 | 3145.7 |
| 5° | 3918.9 | 3896.4 | 3847.5 | 3682.2 | 3568.0 | 3443.6 | 3339.5 | 3221.2 | 3104.9 | 3025.4 | 2945.8 |
| 7.5° | 4212.6 | 4184.1 | 4108.6 | 3855.6 | 3670.0 | 3490.5 | 3333.4 | 3162.0 | 2988.6 | 2870.3 | 2776.5 |
| 10° | 4506.4 | 4447.2 | 4351.4 | 4020.9 | 3776.1 | 3568.0 | 3388.5 | 3178.4 | 2947.8 | 2786.7 | 2686.7 |
| 12.5° | 4730.8 | 4675.7 | 4571.7 | 4171.8 | 3882.2 | 3621.0 | 3419.1 | 3225.3 | 3029.4 | 2858.1 | 2756.1 |
| 15° | 4940.9 | 4869.5 | 4751.2 | 4312.6 | 3969.9 | 3619.0 | 3357.9 | 3188.6 | 3160.0 | 3117.2 | 2984.6 |
| 17.5° | 5091.9 | 5026.6 | 4904.2 | 4426.8 | 4018.8 | 3555.8 | 3188.6 | 3088.6 | 3217.1 | 3347.7 | 3221.2 |
| 20° | 5224.5 | 5149.0 | 5024.6 | 4506.4 | 4029.0 | 3415.0 | 2982.5 | 2984.6 | 3186.5 | 3366.0 | 3335.4 |
| 22.5° | 5336.7 | 5253.1 | 5142.9 | 4596.2 | 4025.0 | 3219.2 | 2803.0 | 2925.4 | 3127.4 | 3268.1 | 3272.2 |
| 25° | 5475.4 | 5406.1 | 5314.3 | 4728.8 | 4025.0 | 3019.2 | 2672.4 | 2854.0 | 3027.4 | 3145.7 | 3141.6 |
| 27.5° | 5644.7 | 5597.8 | 5522.3 | 4930.7 | 4061.7 | 2851.9 | 2599.0 | 2762.2 | 2898.9 | 3000.9 | 2998.8 |
| 30° | 5834.5 | 5791.6 | 5734.5 | 5144.9 | 4124.9 | 2727.5 | 2558.2 | 2647.9 | 2747.9 | 2829.5 | 2829.5 |
| 32.5° | 6028.3 | 6011.9 | 5950.7 | 5316.3 | 4076.0 | 2688.7 | 2523.5 | 2533.7 | 2586.7 | 2654.1 | 2647.9 |
| 35° | 6297.5 | 6281.2 | 6203.7 | 5448.9 | 3863.8 | 2633.7 | 2468.4 | 2417.4 | 2423.5 | 2466.4 | 2480.7 |
| 37.5° | 6691.3 | 6666.8 | 6552.5 | 5603.9 | 3543.5 | 2494.9 | 2378.7 | 2295.0 | 2276.7 | 2295.0 | 2321.5 |
| 40° | 7166.6 | 7129.9 | 6974.8 | 5814.1 | 3174.3 | 2307.3 | 2237.9 | 2168.5 | 2137.9 | 2144.1 | 2174.7 |
| 42.5° | 7762.3 | 7684.8 | 7462.4 | 6036.4 | 2809.1 | 2142.0 | 2080.8 | 2038.0 | 2003.3 | 1999.2 | 2058.4 |
| 45° | 8729.2 | 8517.1 | 8164.2 | 6234.3 | 2501.1 | 2054.3 | 1940.1 | 1909.5 | 1880.9 | 1897.2 | 1966.6 |
| 47.5° | 10418.4 | 10026.7 | 9339.2 | 6403.6 | 2313.4 | 2056.3 | 1827.9 | 1795.2 | 1793.2 | 1825.8 | 1903.3 |
| 50° | 12739.9 | 12174.8 | 11114.0 | 6517.9 | 2215.5 | 2080.8 | 1760.5 | 1707.5 | 1746.3 | 1778.9 | 1852.3 |
| 52.5° | 14963.6 | 14100.6 | 12837.9 | 6515.8 | 2172.6 | 2084.9 | 1778.9 | 1625.9 | 1746.3 | 1754.4 | 1823.8 |
| 55° | 16862.8 | 15300.2 | 13303.0 | 5846.7 | 2111.4 | 2068.6 | 1850.3 | 1562.7 | 1723.8 | 1754.4 | 1809.5 |
| 57.5° | 18372.4 | 16063.1 | 13268.3 | 4722.6 | 2297.1 | 1978.8 | 1893.1 | 1548.4 | 1658.5 | 1758.5 | 1821.7 |
| 60° | 18205.1 | 15714.3 | 12413.5 | 2898.9 | 2278.7 | 1819.7 | 1887.0 | 1574.9 | 1548.4 | 1703.4 | 1807.5 |
| 62.5° | *17093.3* | *14463.7* | *10942.7* | *2011.5* | *2140.0* | *1727.9* | *1787.1* | *1621.8* | *1446.4* | *1623.9* | *1738.1* |
| 65° | 15536.8 | 12850.1 | 9118.9 | 1542.3 | 1772.8 | 1732.0 | 1617.7 | 1589.2 | 1356.6 | 1497.4 | 1619.8 |
| 67.5° | 13478.4 | 10848.8 | 7199.2 | 1222.0 | 1236.3 | 1499.4 | 1468.8 | 1411.7 | 1273.0 | 1385.2 | 1495.3 |
| 70° | 10132.8 | 7917.3 | 4953.2 | 983.3 | 936.4 | 1252.6 | 1319.9 | 1268.9 | 1191.4 | 1224.0 | 1340.3 |
| 72.5° | 7140.1 | 5169.4 | 2713.2 | 779.3 | 722.2 | 962.9 | 1146.5 | 1138.3 | 1052.7 | 1077.1 | 1191.4 |
| 75° | 5306.1 | 3657.8 | 1695.3 | 616.1 | 587.5 | 689.5 | 960.8 | 985.3 | 913.9 | 942.5 | 1030.2 |
| 77.5° | 3531.3 | 2368.5 | 942.5 | 457.0 | 457.0 | 503.9 | 716.0 | 830.3 | 777.2 | 799.7 | 860.9 |
| 80° | 1948.2 | 1205.7 | 471.2 | 299.9 | 308.0 | 346.8 | 522.2 | 597.7 | 599.8 | 654.8 | 671.2 |
| 82.5° | 616.1 | 383.5 | 210.1 | 175.4 | 165.2 | 197.9 | 336.6 | 428.4 | 399.8 | 510.0 | 469.2 |
| 85° | 140.8 | 89.8 | 38.8 | 38.8 | 42.8 | 65.3 | 128.5 | 228.5 | 291.7 | 350.9 | 255.0 |
| 87.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2.0 | 89.8 | 132.6 | 118.3 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

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**CANDELA DISTRIBUTION (continued):**

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 3325.2 | 3325.2 | 3325.2 | 3325.2 | 3325.2 | 3325.2 | 3325.2 | 3325.2 | 3325.2 | 3325.2 | 3325.2 |
| 2.5° | 3117.2 | 3076.4 | 3064.1 | 3029.4 | 3025.4 | 2992.7 | 2980.5 | 2980.5 | 2994.8 | 2994.8 | 3009.0 |
| 5° | 2913.1 | 2862.1 | 2833.6 | 2792.8 | 2782.6 | 2758.1 | 2741.8 | 2743.8 | 2762.2 | 2774.4 | 2798.9 |
| 7.5° | 2733.6 | 2698.9 | 2678.5 | 2660.2 | 2656.1 | 2652.0 | 2633.7 | 2631.6 | 2637.7 | 2656.1 | 2674.5 |
| 10° | 2658.1 | 2633.7 | 2639.8 | 2654.1 | 2676.5 | 2688.7 | 2672.4 | 2664.3 | 2658.1 | 2670.4 | 2686.7 |
| 12.5° | 2731.6 | 2707.1 | 2719.3 | 2743.8 | 2774.4 | 2786.7 | 2780.5 | 2778.5 | 2784.6 | 2831.5 | 2866.2 |
| 15° | 2892.7 | 2845.8 | 2829.5 | 2839.7 | 2864.2 | 2876.4 | 2870.3 | 2878.5 | 2917.2 | 3039.6 | 3127.4 |
| 17.5° | 3092.7 | 2978.4 | 2913.1 | 2894.8 | 2905.0 | 2915.2 | 2915.2 | 2935.6 | 3002.9 | 3182.4 | 3292.6 |
| 20° | 3200.8 | 3051.9 | 2941.7 | 2896.8 | 2900.9 | 2911.1 | 2911.1 | 2939.7 | 3015.2 | 3206.9 | 3278.3 |
| 22.5° | 3172.2 | 3035.6 | 2900.9 | 2851.9 | 2854.0 | 2862.1 | 2862.1 | 2886.6 | 2954.0 | 3123.3 | 3155.9 |
| 25° | 3060.0 | 2939.7 | 2807.1 | 2764.2 | 2768.3 | 2782.6 | 2778.5 | 2792.8 | 2843.8 | 2982.5 | 3000.9 |
| 27.5° | 2925.4 | 2819.3 | 2688.7 | 2656.1 | 2674.5 | 2703.0 | 2678.5 | 2680.6 | 2727.5 | 2843.8 | 2845.8 |
| 30° | 2780.5 | 2692.8 | 2576.5 | 2552.1 | 2586.7 | 2601.0 | 2578.6 | 2578.6 | 2625.5 | 2705.1 | 2703.0 |
| 32.5° | 2623.5 | 2568.4 | 2484.7 | 2458.2 | 2497.0 | 2519.4 | 2490.9 | 2494.9 | 2531.7 | 2584.7 | 2564.3 |
| 35° | 2476.6 | 2448.0 | 2409.3 | 2390.9 | 2415.4 | 2435.8 | 2417.4 | 2425.6 | 2460.3 | 2474.5 | 2446.0 |
| 37.5° | 2335.8 | 2331.7 | 2335.8 | 2335.8 | 2341.9 | 2348.1 | 2335.8 | 2356.2 | 2386.8 | 2368.5 | 2335.8 |
| 40° | 2213.4 | 2229.7 | 2268.5 | 2258.3 | 2252.2 | 2258.3 | 2250.1 | 2284.8 | 2315.4 | 2282.8 | 2244.0 |
| 42.5° | 2111.4 | 2142.0 | 2201.2 | 2201.2 | 2188.9 | 2193.0 | 2188.9 | 2231.8 | 2254.2 | 2209.3 | 2166.5 |
| 45° | 2023.7 | 2068.6 | 2144.1 | 2154.3 | 2133.9 | 2133.9 | 2142.0 | 2195.1 | 2203.2 | 2142.0 | 2097.1 |
| 47.5° | 1962.5 | 2017.6 | 2103.3 | 2121.6 | 2091.0 | 2089.0 | 2111.4 | 2168.5 | 2168.5 | 2097.1 | 2046.1 |
| 50° | 1919.7 | 1980.9 | 2082.9 | 2107.3 | 2076.7 | 2068.6 | 2105.3 | 2160.4 | 2148.1 | 2062.5 | 2011.5 |
| 52.5° | 1891.1 | 1954.3 | 2080.8 | 2115.5 | 2095.1 | 2086.9 | 2123.7 | 2162.4 | 2131.8 | 2040.0 | 1987.0 |
| 55° | 1872.7 | 1942.1 | 2086.9 | 2115.5 | 2093.1 | 2078.8 | 2115.5 | 2150.2 | 2133.9 | 2027.8 | 1976.8 |
| 57.5° | 1882.9 | 1952.3 | 2078.8 | 2093.1 | 2066.5 | 2042.1 | 2084.9 | 2133.9 | 2127.7 | 2031.9 | 1980.9 |
| 60° | 1866.6 | 1929.9 | 2033.9 | 2038.0 | 1993.1 | 1954.3 | 2017.6 | 2091.0 | 2091.0 | 2017.6 | 1972.7 |
| 62.5° | *1791.1* | *1854.4* | *1946.2* | *1950.3* | *1899.3* | *1856.4* | *1929.9* | *2017.6* | *2015.5* | *1956.4* | *1909.5* |
| 65° | 1666.7 | 1725.9 | 1829.9 | 1840.1 | 1789.1 | 1744.2 | 1819.7 | 1901.3 | 1907.4 | 1854.4 | 1813.6 |
| 67.5° | 1530.0 | 1583.1 | 1660.6 | 1701.4 | 1658.5 | 1611.6 | 1681.0 | 1758.5 | 1756.5 | 1693.2 | 1650.4 |
| 70° | 1366.8 | 1415.8 | 1487.2 | 1521.9 | 1495.3 | 1450.5 | 1513.7 | 1554.5 | 1536.1 | 1505.5 | 1477.0 |
| 72.5° | 1205.7 | 1252.6 | 1319.9 | 1319.9 | 1291.3 | 1248.5 | 1266.9 | 1340.3 | 1362.7 | 1340.3 | 1321.9 |
| 75° | 1036.3 | 1077.1 | 1124.1 | 1134.3 | 1071.0 | 993.5 | 1079.2 | 1142.4 | 1168.9 | 1158.7 | 1136.3 |
| 77.5° | 862.9 | 893.5 | 962.9 | 944.5 | 826.2 | 785.4 | 854.8 | 948.6 | 967.0 | 960.8 | 930.2 |
| 80° | 665.0 | 683.4 | 756.8 | 720.1 | 628.3 | 601.8 | 632.4 | 705.8 | 709.9 | 689.5 | 650.8 |
| 82.5° | 446.8 | 471.2 | 520.2 | 448.8 | 446.8 | 422.3 | 397.8 | 406.0 | 442.7 | 438.6 | 412.1 |
| 85° | 228.5 | 240.7 | 287.6 | 269.3 | 230.5 | 199.9 | 189.7 | 202.0 | 181.6 | 165.2 | 142.8 |
| 87.5° | 95.9 | 104.0 | 142.8 | 79.6 | 24.5 | 0.0 | 0.0 | 12.2 | 18.4 | 26.5 | 28.6 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

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**CANDELA DISTRIBUTION (continued):**

| | 185° | 195° | 205° | 215° | 225° | 235° | 245° | 255° | 265° | 270° | 275° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 3325.2 | 3325.2 | 3325.2 | 3325.2 | 3325.2 | 3325.2 | 3325.2 | 3325.2 | 3325.2 | 3325.2 | 3325.2 |
| 2.5° | 3041.7 | 3064.1 | 3119.2 | 3188.6 | 3255.9 | 3325.2 | 3400.7 | 3447.6 | 3504.8 | 3578.2 | 3580.2 |
| 5° | 2829.5 | 2880.5 | 2960.1 | 3066.2 | 3176.3 | 3302.8 | 3449.7 | 3572.1 | 3719.0 | 3835.2 | 3882.2 |
| 7.5° | 2698.9 | 2772.4 | 2872.3 | 3007.0 | 3151.8 | 3308.9 | 3500.7 | 3706.7 | 3947.4 | 4102.5 | 4194.3 |
| 10° | 2711.2 | 2823.4 | 2923.4 | 3037.6 | 3168.2 | 3337.5 | 3584.3 | 3857.7 | 4153.5 | 4357.5 | 4471.7 |
| 12.5° | 2929.5 | 3047.8 | 3029.4 | 3023.3 | 3111.0 | 3317.1 | 3651.6 | 4010.7 | 4371.8 | 4575.8 | 4712.4 |
| 15° | 3204.9 | 3249.8 | 3076.4 | 2945.8 | 2998.8 | 3243.6 | 3688.4 | 4147.4 | 4553.3 | 4802.2 | 4936.9 |
| 17.5° | 3345.6 | 3255.9 | 3045.8 | 2849.9 | 2835.6 | 3131.4 | 3706.7 | 4286.1 | 4757.3 | 5006.2 | 5149.0 |
| 20° | 3280.4 | 3149.8 | 2972.3 | 2786.7 | 2684.7 | 2978.4 | 3696.5 | 4396.2 | 4943.0 | 5220.4 | 5336.7 |
| 22.5° | 3139.6 | 3025.4 | 2886.6 | 2709.1 | 2562.3 | 2811.1 | 3670.0 | 4506.4 | 5108.2 | 5387.7 | 5489.7 |
| 25° | 2986.6 | 2900.9 | 2786.7 | 2631.6 | 2492.9 | 2664.3 | 3651.6 | 4653.3 | 5297.9 | 5565.2 | 5630.5 |
| 27.5° | 2833.6 | 2770.3 | 2676.5 | 2556.1 | 2476.6 | 2562.3 | 3657.8 | 4845.0 | 5542.7 | 5795.7 | 5769.2 |
| 30° | 2682.6 | 2627.5 | 2562.3 | 2509.2 | 2474.5 | 2537.8 | 3641.4 | 5049.1 | 5812.0 | 6046.6 | 5889.5 |
| 32.5° | 2539.8 | 2488.8 | 2448.0 | 2456.2 | 2476.6 | 2548.0 | 3557.8 | 5234.7 | 6058.9 | 6258.8 | 6020.1 |
| 35° | 2417.4 | 2364.4 | 2364.4 | 2392.9 | 2468.4 | 2513.3 | 3341.6 | 5379.5 | 6332.2 | 6532.1 | 6205.7 |
| 37.5° | 2303.2 | 2256.3 | 2286.9 | 2333.8 | 2405.2 | 2419.5 | 3064.1 | 5520.3 | 6730.0 | 6917.7 | 6493.4 |
| 40° | 2203.2 | 2156.3 | 2211.4 | 2270.5 | 2307.3 | 2301.1 | 2782.6 | 5716.1 | 7199.2 | 7393.0 | 6874.9 |
| 42.5° | 2123.7 | 2080.8 | 2129.8 | 2205.3 | 2211.4 | 2217.5 | 2576.5 | 5903.8 | 7743.9 | 7990.8 | 7531.8 |
| 45° | 2058.4 | 2027.8 | 2052.3 | 2127.7 | 2127.7 | 2221.6 | 2448.0 | 6060.9 | 8564.0 | 9000.6 | 8737.4 |
| 47.5° | 2007.4 | 1989.0 | 2001.3 | 2025.7 | 2066.5 | 2295.0 | 2366.4 | 6181.3 | 10057.3 | 10914.1 | 10648.9 |
| 50° | 1978.8 | 1960.5 | 1976.8 | 1925.8 | 2048.2 | 2331.7 | 2339.9 | 6273.1 | 12025.9 | 13368.3 | 13039.8 |
| 52.5° | 1954.3 | 1948.2 | 1958.4 | 1840.1 | 2089.0 | 2307.3 | 2319.5 | 6150.7 | 13345.8 | 15783.6 | 16108.0 |
| 55° | 1946.2 | 1950.3 | 1901.3 | 1776.9 | 2137.9 | 2225.7 | 2258.3 | 5275.5 | 13704.9 | 17866.5 | 19880.0 |
| 57.5° | 1950.3 | 1938.0 | 1813.6 | 1783.0 | 2140.0 | 2062.5 | 2346.0 | 3763.8 | 13182.6 | 18772.3 | 23570.4 |
| 60° | 1936.0 | 1874.8 | 1707.5 | 1838.1 | 2046.1 | 1870.7 | 2282.8 | 2454.1 | 11805.6 | 18076.6 | 23784.6 |
| 62.5° | *1872.7* | *1783.0* | *1615.7* | *1868.7* | *1878.9* | *1756.5* | *2072.7* | *1891.1* | *9969.6* | *16587.4* | *21720.1* |
| 65° | 1780.9 | 1660.6 | 1538.2 | 1805.4 | 1709.5 | 1703.4 | 1558.6 | 1515.7 | 8017.3 | 14814.6 | 19761.7 |
| 67.5° | 1630.0 | 1509.6 | 1481.1 | 1660.6 | 1538.2 | 1509.6 | 1252.6 | 1256.7 | 6397.5 | 12925.6 | 17793.1 |
| 70° | 1458.6 | 1338.3 | 1360.7 | 1501.5 | 1368.9 | 1254.6 | 1013.9 | 1046.5 | 4853.2 | 10769.3 | 15139.0 |
| 72.5° | 1346.4 | 1185.3 | 1187.3 | 1321.9 | 1203.6 | 1015.9 | 834.4 | 862.9 | 3080.4 | 8117.2 | 12036.1 |
| 75° | 1136.3 | 1044.5 | 999.6 | 1071.0 | 1022.1 | 791.5 | 701.8 | 695.6 | 1825.8 | 5818.1 | 9012.8 |
| 77.5° | 948.6 | 877.2 | 854.8 | 883.3 | 763.0 | 585.5 | 565.1 | 554.9 | 1034.3 | 3727.1 | 5905.9 |
| 80° | 687.5 | 669.1 | 667.1 | 681.4 | 587.5 | 430.4 | 430.4 | 432.5 | 556.9 | 2023.7 | 3329.3 |
| 82.5° | 436.6 | 477.4 | 422.3 | 469.2 | 399.8 | 306.0 | 285.6 | 324.4 | 320.3 | 862.9 | 1403.5 |
| 85° | 181.6 | 248.9 | 232.6 | 246.8 | 189.7 | 167.3 | 179.5 | 193.8 | 185.6 | 332.5 | 546.7 |
| 87.5° | 34.7 | 40.8 | 44.9 | 42.8 | 42.8 | 53.0 | 59.2 | 71.4 | 71.4 | 95.9 | 165.2 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report

REPORT NUMBER: P642937
CATALOG NUMBER: GWS-SA6D-830-U-SLL-W

**CANDELA DISTRIBUTION (continued):**

| | 285° | 295° | 305° | 315° | 325° | 335° | 345° | 355° | 358° | 360° |
|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 3325.2 | 3325.2 | 3325.2 | *3325.2* | 3325.2 | 3325.2 | 3325.2 | 3325.2 | 3325.2 | 3325.2 |
| 2.5° | 3657.8 | 3716.9 | 3704.7 | *3731.2* | 3696.5 | 3708.8 | 3639.4 | 3621.0 | 3608.8 | 3612.9 |
| 5° | 4033.1 | 4153.5 | 4175.9 | *4220.8* | 4190.2 | 4190.2 | 4067.8 | 3976.0 | 3943.4 | 3918.9 |
| 7.5° | 4414.6 | 4588.0 | 4702.2 | *4714.5* | 4698.2 | 4665.5 | 4488.0 | 4322.8 | 4263.6 | 4212.6 |
| 10° | 4753.2 | 4961.3 | 5089.9 | *5151.1* | 5120.5 | 5069.5 | 4849.1 | 4622.7 | 4551.3 | 4506.4 |
| 12.5° | 5012.3 | 5195.9 | 5281.6 | *5322.4* | 5318.3 | 5300.0 | 5120.5 | 4875.7 | 4800.2 | 4730.8 |
| 15° | 5179.6 | 5271.4 | 5238.8 | *5236.7* | 5265.3 | 5338.7 | 5283.7 | 5091.9 | 5004.2 | 4940.9 |
| 17.5° | 5287.7 | 5200.0 | 5055.2 | *4987.9* | 5049.1 | 5222.5 | 5348.9 | 5240.8 | 5161.3 | 5091.9 |
| 20° | 5326.5 | 5014.4 | 4804.2 | *4679.8* | 4751.2 | 5002.1 | 5314.3 | 5348.9 | 5281.6 | 5224.5 |
| 22.5° | 5281.6 | 4787.9 | 4502.3 | *4355.4* | 4424.8 | 4724.7 | 5212.3 | 5436.7 | 5391.8 | 5336.7 |
| 25° | 5171.5 | 4551.3 | 4208.6 | *4076.0* | 4151.4 | 4457.4 | 5030.7 | 5518.3 | 5520.3 | 5475.4 |
| 27.5° | 5034.8 | 4333.0 | 4002.5 | *3878.1* | 3951.5 | 4237.1 | 4853.2 | 5589.7 | 5661.1 | 5644.7 |
| 30° | 4896.1 | 4202.4 | 3904.6 | *3816.9* | 3872.0 | 4124.9 | 4671.6 | 5663.1 | 5805.9 | 5834.5 |
| 32.5° | 4832.8 | 4265.7 | 4135.1 | *4173.9* | 4102.5 | 4190.2 | 4606.4 | 5767.1 | 5981.3 | 6028.3 |
| 35° | 4916.5 | 4826.7 | 5157.2 | *5310.2* | 5057.2 | 4724.7 | 4690.0 | 5924.2 | 6228.2 | 6297.5 |
| 37.5° | 5322.4 | 6028.3 | 6521.9 | *7060.5* | 6621.9 | 5889.5 | 5104.1 | 6191.5 | 6581.1 | 6691.3 |
| 40° | 6205.7 | 7076.8 | 7968.3 | *8664.0* | 8001.0 | 7015.6 | 5891.6 | 6589.3 | 7066.6 | 7166.6 |
| 42.5° | 7038.1 | 8060.1 | 9288.2 | *10187.9* | 9327.0 | 7935.7 | 6740.2 | 7258.4 | 7707.2 | 7762.3 |
| 45° | 7854.1 | 9025.1 | 10885.6 | *12136.1* | 10967.2 | 8810.9 | 7607.2 | 8388.6 | 8727.2 | 8729.2 |
| 47.5° | 8810.9 | 10112.4 | 12888.9 | *14669.8* | 13143.9 | 9779.9 | 8421.2 | 10177.7 | 10648.9 | 10418.4 |
| 50° | 9955.3 | 11193.6 | 14951.3 | *17617.6* | 15797.9 | 10971.2 | 9455.5 | 12358.4 | 13001.1 | 12739.9 |
| 52.5° | 11487.4 | 12385.0 | 17223.9 | *20492.0* | 18690.7 | 12327.8 | 10954.9 | 15239.0 | 15451.1 | 14963.6 |
| 55° | 13643.7 | 14104.7 | 20141.1 | *24041.6* | 21920.0 | 13998.6 | 13147.9 | 18853.9 | 18260.2 | 16862.8 |
| 57.5° | 18554.0 | 16826.1 | 23886.6 | *28091.1* | 25573.7 | 17034.2 | 17954.2 | 22840.1 | 20728.7 | 18372.4 |
| 60° | 22662.6 | 20130.9 | 27352.6 | *32109.9* | 28705.1 | 20379.8 | 22466.8 | 23533.7 | 20636.9 | 18205.1 |
| 62.5° | *21277.4* | *20973.5* | *28603.1* | *32552.6* | *29774.1* | *22026.1* | *21628.3* | *21785.4* | *19290.4* | *17093.3* |
| 65° | 18668.2 | 19347.6 | 27487.2 | *30453.4* | 28588.9 | 20551.2 | 19563.8 | 20169.7 | 17750.2 | 15536.8 |
| 67.5° | 17128.0 | 17627.8 | 25502.3 | *27093.5* | 26434.6 | 18955.9 | 17958.3 | 17519.7 | 15359.3 | 13478.4 |
| 70° | 15553.1 | 15967.2 | 22715.6 | *22876.8* | 23074.7 | 16303.8 | 14684.1 | 13378.5 | 11448.6 | 10132.8 |
| 72.5° | 13439.7 | 13462.1 | 19192.5 | *18258.2* | 18633.6 | 12758.3 | 11819.9 | 10002.2 | 8333.5 | 7140.1 |
| 75° | 11275.2 | 10659.1 | 15192.0 | *12762.4* | 13515.1 | 9924.7 | 9814.5 | 7537.9 | 6285.3 | 5306.1 |
| 77.5° | 8596.6 | 7876.5 | 11097.7 | *8392.6* | 9492.2 | 6609.7 | 7378.8 | 5112.3 | 4422.8 | 3531.3 |
| 80° | 5771.2 | 5322.4 | 6132.3 | *4736.9* | 6209.8 | 4555.4 | 4812.4 | 2896.8 | 2511.3 | 1948.2 |
| 82.5° | 3043.7 | 2599.0 | 3790.4 | *2809.1* | 3745.5 | 2503.1 | 1805.4 | 895.6 | 763.0 | 616.1 |
| 85° | 1179.1 | 1364.8 | 1858.5 | *999.6* | 1452.5 | 893.5 | 522.2 | 222.4 | 185.6 | 140.8 |
| 87.5° | 228.5 | 352.9 | 193.8 | *0.0* | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 90° | 0.0 | 0.0 | 0.0 | *0.0* | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

# LM-79-2019: Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products

Report Prepared for

Cooper Lighting Solutions

MCGRAW EDISON

Report Number: SP1-2408-195-9

Test Date: 08/07/2024

Luminaire Tested: GALN-SB1A-830-U-5WQ

Data in this report applies to families of products including GALN-SB1A-830-U-5WQ.

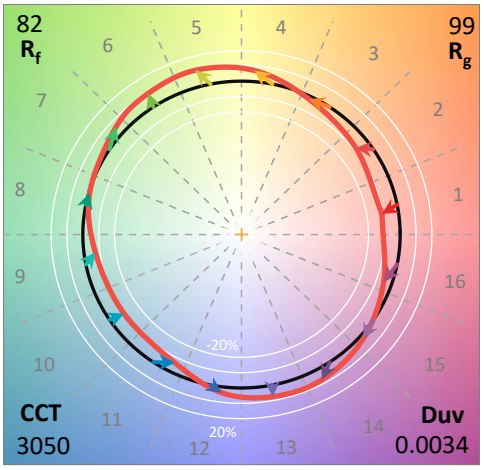
Report Generated By FNC07603 / LDUCLS01DT446
Version: v7.04

## Test Information

| | |
|---|---|
| Test Method: | LM-79-2019 |
| Report Number: | SP1-2408-195-9 |
| Test Lab: | COOPER LIGHTING SOLUTIONS |
| Photometer: | SP1 - 76IN SPHERE |
| Measurement Geometry: | 4π |
| Issue Date: | 08/07/2024 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS |
| Product Line: | MCGRAW EDISON |
| Catalog Number: | **GALN-SB1A-830-U-5WQ** |
| Description: | GALLEON AREA AND ROADWAY LUMINAIRE. (1) 80 CRI, 3000K, 350MA HIGH DENSITY LIGHTSQUARE WITH 26 LEDS AND TYPE V WIDE OPTICS |

## Spectral Parameters

| | | | | | |
|---|---|---|---|---|---|
| CCT (K): | 3050 | CRI (Ra): | 81.0 | | |
| CIE u': | 0.2476 | R1: | 79.6 | R9: | 7.1 |
| CIE v': | 0.5251 | R2: | 85.6 | R10: | 67.0 |
| Duv: | 0.0034 | R3: | 92.0 | R11: | 82.7 |
| CIE x: | 0.4383 | R4: | 82.6 | R12: | 63.2 |
| CIE y: | 0.4131 | R5: | 78.9 | R13: | 80.3 |
| CIE z: | 0.1487 | R6: | 81.7 | R14: | 95.0 |
| Peak Wavelength (nm): | 603 | R7: | 85.2 | R15: | 71.7 |
| Dominant Wavelength (nm): | 581 | R8: | 62.0 | | |
| Purity: | 55.55201 | | | | |
| Rf: | 81.5 | | | | |
| Rg: | 99.2 | | | | |




## Test Conditions

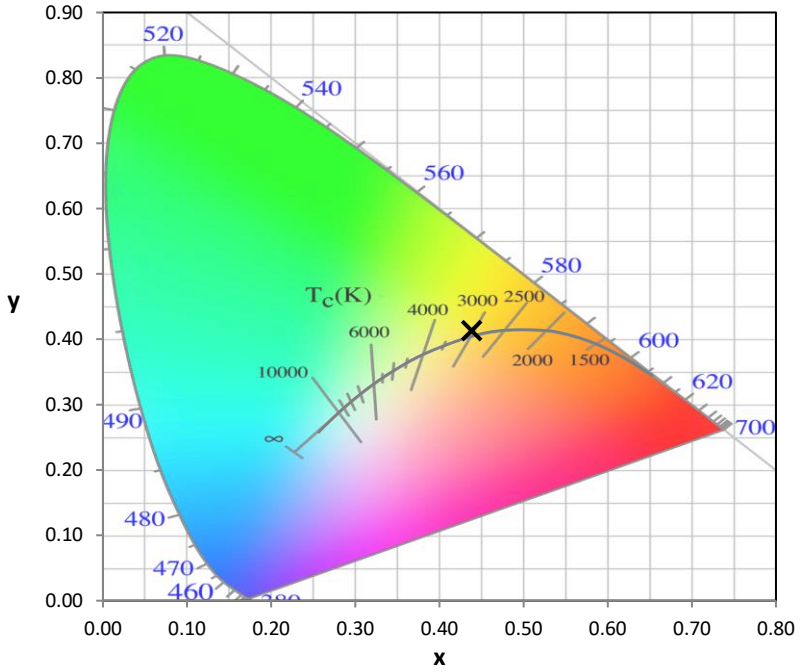
| | |
|---|---|
| Stabilization Time: | 20M |
| Operation Time: | 1H 20M |
| Sphere Temperature (°C): | 24.2 |

REPORT NUMBER: SP1-2408-195-9

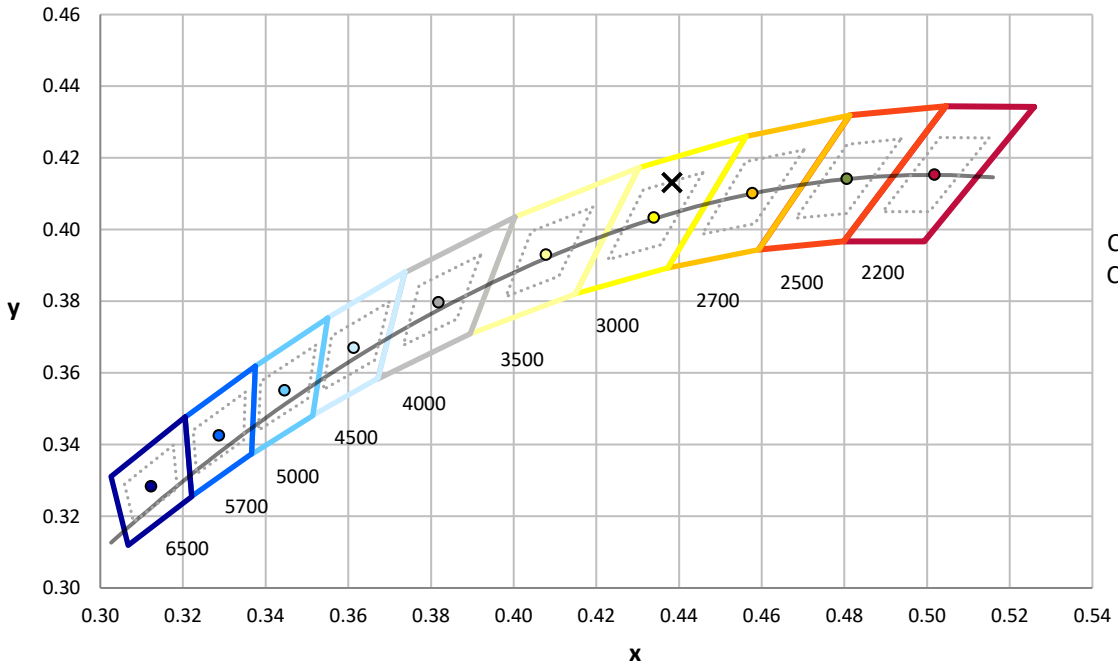
| Measurement and Test Equipment | | | |
|---|---|---|---|
| Instrument | Identification Number | Calibration Date | Calibration Due Date |
| Photometer | IN0058 | 6/18/2024 | 12/18/2024 |
| Power Meter | INXT2011004 | 2/8/2024 | 2/8/2025 |
| AC Power Source | IN0063 | 10/24/2023 | 10/24/2024 |
| DC Power Source | IN0208 | 10/24/2023 | 10/24/2024 |
| Sphere Thermometer | IN0085 | 10/24/2023 | 10/24/2024 |
| Room Thermometer | IN0046 | 10/24/2023 | 10/24/2024 |

REPORT NUMBER: SP1-2408-195-9

## CIE 1931 Chromaticity Diagram




## CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles

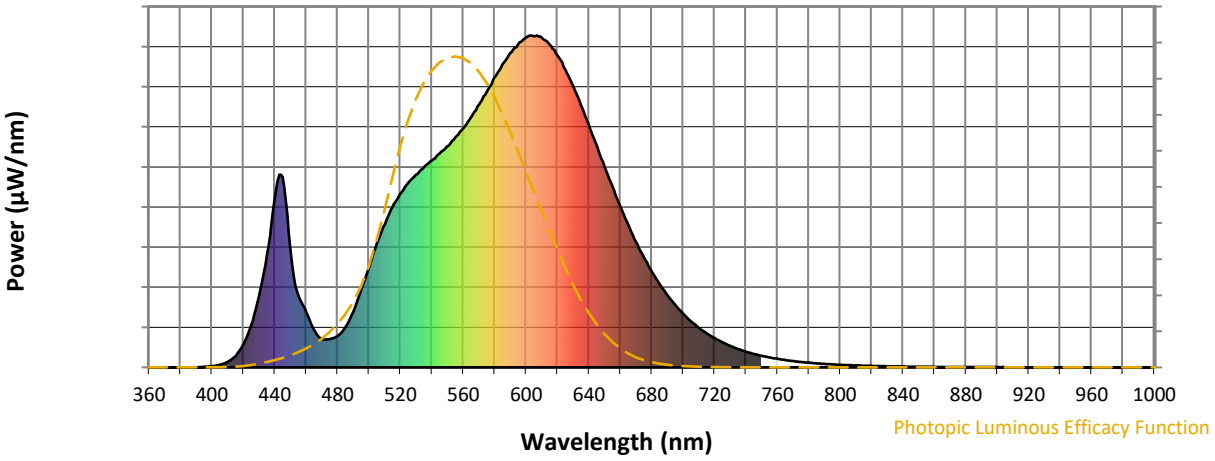



CCT = 3050K
CIE x = 0.4383
CIE y = 0.4131
Duv = 0.0034

Point lies inside the ANSI 3000K 4-step quadrangle

REPORT NUMBER: SP1-2408-195-9

## Photopic Flux vs. Wavelength

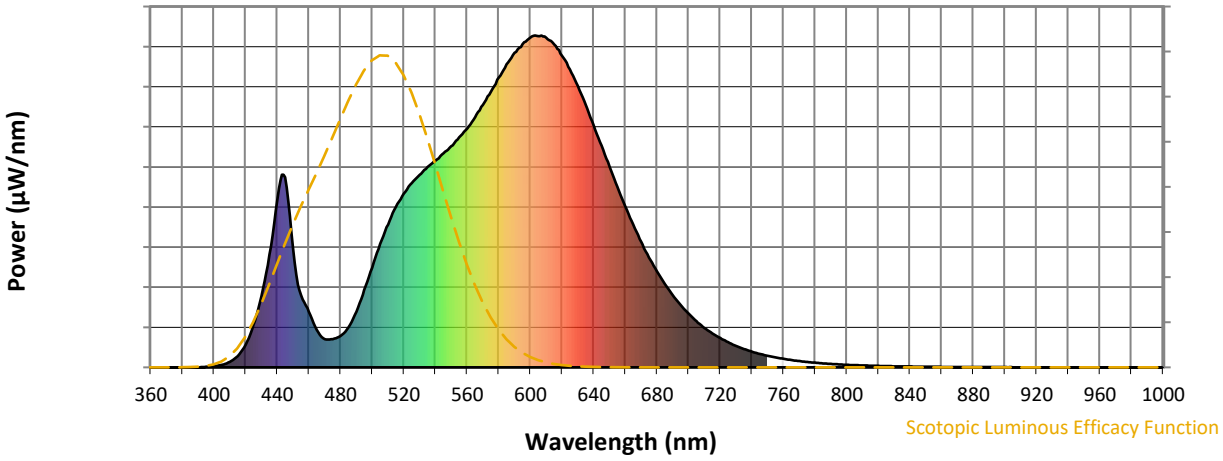



## Photopic Lumens: NR

| λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 360 | 0 | NR | 490 | 168 | NR | 620 | 940 | NR | 750 | 35 | NR | 880 | 1 | NR |
| 365 | 0 | NR | 495 | 233 | NR | 625 | 897 | NR | 755 | 30 | NR | 885 | 1 | NR |
| 370 | 0 | NR | 500 | 300 | NR | 630 | 847 | NR | 760 | 26 | NR | 890 | 1 | NR |
| 375 | 0 | NR | 505 | 372 | NR | 635 | 790 | NR | 765 | 22 | NR | 895 | 1 | NR |
| 380 | 0 | NR | 510 | 430 | NR | 640 | 730 | NR | 770 | 19 | NR | 900 | 1 | NR |
| 385 | 0 | NR | 515 | 483 | NR | 645 | 668 | NR | 775 | 16 | NR | 905 | 1 | NR |
| 390 | 0 | NR | 520 | 524 | NR | 650 | 605 | NR | 780 | 14 | NR | 910 | 0 | NR |
| 395 | 2 | NR | 525 | 555 | NR | 655 | 545 | NR | 785 | 12 | NR | 915 | 0 | NR |
| 400 | 4 | NR | 530 | 581 | NR | 660 | 485 | NR | 790 | 10 | NR | 920 | 0 | NR |
| 405 | 7 | NR | 535 | 604 | NR | 665 | 430 | NR | 795 | 9 | NR | 925 | 0 | NR |
| 410 | 17 | NR | 540 | 623 | NR | 670 | 378 | NR | 800 | 8 | NR | 930 | 0 | NR |
| 415 | 34 | NR | 545 | 645 | NR | 675 | 331 | NR | 805 | 7 | NR | 935 | 0 | NR |
| 420 | 68 | NR | 550 | 667 | NR | 680 | 290 | NR | 810 | 6 | NR | 940 | 0 | NR |
| 425 | 128 | NR | 555 | 693 | NR | 685 | 251 | NR | 815 | 5 | NR | 945 | 0 | NR |
| 430 | 214 | NR | 560 | 719 | NR | 690 | 218 | NR | 820 | 4 | NR | 950 | 0 | NR |
| 435 | 339 | NR | 565 | 754 | NR | 695 | 188 | NR | 825 | 4 | NR | 955 | 0 | NR |
| 440 | 507 | NR | 570 | 791 | NR | 700 | 162 | NR | 830 | 3 | NR | 960 | 0 | NR |
| 445 | 573 | NR | 575 | 830 | NR | 705 | 139 | NR | 835 | 3 | NR | 965 | 0 | NR |
| 450 | 356 | NR | 580 | 873 | NR | 710 | 119 | NR | 840 | 3 | NR | 970 | 0 | NR |
| 455 | 217 | NR | 585 | 913 | NR | 715 | 102 | NR | 845 | 2 | NR | 975 | 0 | NR |
| 460 | 168 | NR | 590 | 948 | NR | 720 | 88 | NR | 850 | 2 | NR | 980 | 0 | NR |
| 465 | 113 | NR | 595 | 974 | NR | 725 | 76 | NR | 855 | 2 | NR | 985 | 0 | NR |
| 470 | 85 | NR | 600 | 994 | NR | 730 | 65 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 85 | NR | 605 | 998 | NR | 735 | 55 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 94 | NR | 610 | 994 | NR | 740 | 47 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 120 | NR | 615 | 973 | NR | 745 | 41 | NR | 875 | 1 | NR | | | |

REPORT NUMBER: SP1-2408-195-9

## Scotopic Flux vs. Wavelength

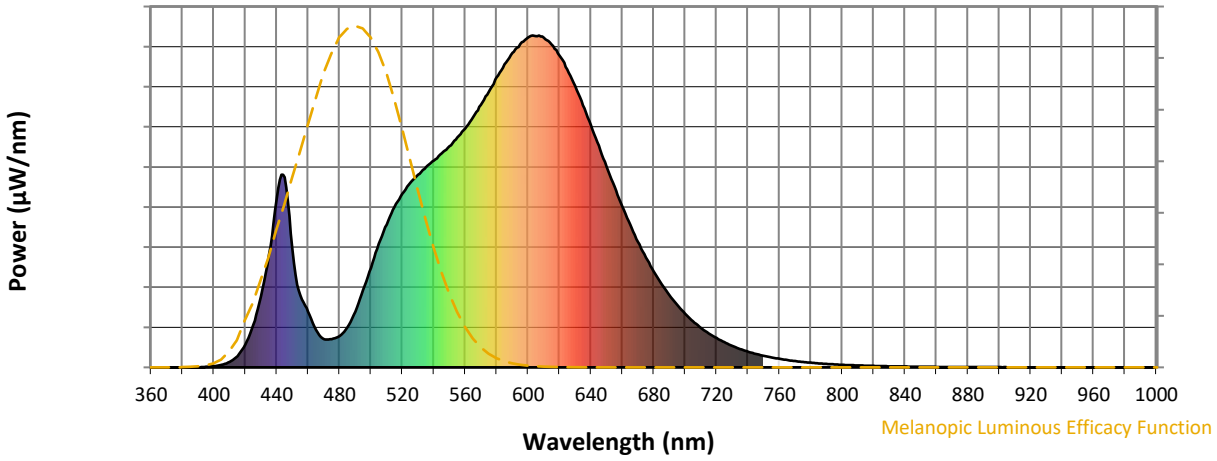



**Scotopic Lumens: NR** **S/P: 1.27**

| λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 360 | 0 | NR | 490 | 168 | NR | 620 | 940 | NR | 750 | 35 | NR | 880 | 1 | NR |
| 365 | 0 | NR | 495 | 233 | NR | 625 | 897 | NR | 755 | 30 | NR | 885 | 1 | NR |
| 370 | 0 | NR | 500 | 300 | NR | 630 | 847 | NR | 760 | 26 | NR | 890 | 1 | NR |
| 375 | 0 | NR | 505 | 372 | NR | 635 | 790 | NR | 765 | 22 | NR | 895 | 1 | NR |
| 380 | 0 | NR | 510 | 430 | NR | 640 | 730 | NR | 770 | 19 | NR | 900 | 1 | NR |
| 385 | 0 | NR | 515 | 483 | NR | 645 | 668 | NR | 775 | 16 | NR | 905 | 1 | NR |
| 390 | 0 | NR | 520 | 524 | NR | 650 | 605 | NR | 780 | 14 | NR | 910 | 0 | NR |
| 395 | 2 | NR | 525 | 555 | NR | 655 | 545 | NR | 785 | 12 | NR | 915 | 0 | NR |
| 400 | 4 | NR | 530 | 581 | NR | 660 | 485 | NR | 790 | 10 | NR | 920 | 0 | NR |
| 405 | 7 | NR | 535 | 604 | NR | 665 | 430 | NR | 795 | 9 | NR | 925 | 0 | NR |
| 410 | 17 | NR | 540 | 623 | NR | 670 | 378 | NR | 800 | 8 | NR | 930 | 0 | NR |
| 415 | 34 | NR | 545 | 645 | NR | 675 | 331 | NR | 805 | 7 | NR | 935 | 0 | NR |
| 420 | 68 | NR | 550 | 667 | NR | 680 | 290 | NR | 810 | 6 | NR | 940 | 0 | NR |
| 425 | 128 | NR | 555 | 693 | NR | 685 | 251 | NR | 815 | 5 | NR | 945 | 0 | NR |
| 430 | 214 | NR | 560 | 719 | NR | 690 | 218 | NR | 820 | 4 | NR | 950 | 0 | NR |
| 435 | 339 | NR | 565 | 754 | NR | 695 | 188 | NR | 825 | 4 | NR | 955 | 0 | NR |
| 440 | 507 | NR | 570 | 791 | NR | 700 | 162 | NR | 830 | 3 | NR | 960 | 0 | NR |
| 445 | 573 | NR | 575 | 830 | NR | 705 | 139 | NR | 835 | 3 | NR | 965 | 0 | NR |
| 450 | 356 | NR | 580 | 873 | NR | 710 | 119 | NR | 840 | 3 | NR | 970 | 0 | NR |
| 455 | 217 | NR | 585 | 913 | NR | 715 | 102 | NR | 845 | 2 | NR | 975 | 0 | NR |
| 460 | 168 | NR | 590 | 948 | NR | 720 | 88 | NR | 850 | 2 | NR | 980 | 0 | NR |
| 465 | 113 | NR | 595 | 974 | NR | 725 | 76 | NR | 855 | 2 | NR | 985 | 0 | NR |
| 470 | 85 | NR | 600 | 994 | NR | 730 | 65 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 85 | NR | 605 | 998 | NR | 735 | 55 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 94 | NR | 610 | 994 | NR | 740 | 47 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 120 | NR | 615 | 973 | NR | 745 | 41 | NR | 875 | 1 | NR | | | |

REPORT NUMBER: SP1-2408-195-9

## Melanopic Flux vs. Wavelength




**Melanopic Lumens: NR** **M/P: 2.32**

| λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 360 | 0 | NR | 490 | 168 | NR | 620 | 940 | NR | 750 | 35 | NR | 880 | 1 | NR |
| 365 | 0 | NR | 495 | 233 | NR | 625 | 897 | NR | 755 | 30 | NR | 885 | 1 | NR |
| 370 | 0 | NR | 500 | 300 | NR | 630 | 847 | NR | 760 | 26 | NR | 890 | 1 | NR |
| 375 | 0 | NR | 505 | 372 | NR | 635 | 790 | NR | 765 | 22 | NR | 895 | 1 | NR |
| 380 | 0 | NR | 510 | 430 | NR | 640 | 730 | NR | 770 | 19 | NR | 900 | 1 | NR |
| 385 | 0 | NR | 515 | 483 | NR | 645 | 668 | NR | 775 | 16 | NR | 905 | 1 | NR |
| 390 | 0 | NR | 520 | 524 | NR | 650 | 605 | NR | 780 | 14 | NR | 910 | 0 | NR |
| 395 | 2 | NR | 525 | 555 | NR | 655 | 545 | NR | 785 | 12 | NR | 915 | 0 | NR |
| 400 | 4 | NR | 530 | 581 | NR | 660 | 485 | NR | 790 | 10 | NR | 920 | 0 | NR |
| 405 | 7 | NR | 535 | 604 | NR | 665 | 430 | NR | 795 | 9 | NR | 925 | 0 | NR |
| 410 | 17 | NR | 540 | 623 | NR | 670 | 378 | NR | 800 | 8 | NR | 930 | 0 | NR |
| 415 | 34 | NR | 545 | 645 | NR | 675 | 331 | NR | 805 | 7 | NR | 935 | 0 | NR |
| 420 | 68 | NR | 550 | 667 | NR | 680 | 290 | NR | 810 | 6 | NR | 940 | 0 | NR |
| 425 | 128 | NR | 555 | 693 | NR | 685 | 251 | NR | 815 | 5 | NR | 945 | 0 | NR |
| 430 | 214 | NR | 560 | 719 | NR | 690 | 218 | NR | 820 | 4 | NR | 950 | 0 | NR |
| 435 | 339 | NR | 565 | 754 | NR | 695 | 188 | NR | 825 | 4 | NR | 955 | 0 | NR |
| 440 | 507 | NR | 570 | 791 | NR | 700 | 162 | NR | 830 | 3 | NR | 960 | 0 | NR |
| 445 | 573 | NR | 575 | 830 | NR | 705 | 139 | NR | 835 | 3 | NR | 965 | 0 | NR |
| 450 | 356 | NR | 580 | 873 | NR | 710 | 119 | NR | 840 | 3 | NR | 970 | 0 | NR |
| 455 | 217 | NR | 585 | 913 | NR | 715 | 102 | NR | 845 | 2 | NR | 975 | 0 | NR |
| 460 | 168 | NR | 590 | 948 | NR | 720 | 88 | NR | 850 | 2 | NR | 980 | 0 | NR |
| 465 | 113 | NR | 595 | 974 | NR | 725 | 76 | NR | 855 | 2 | NR | 985 | 0 | NR |
| 470 | 85 | NR | 600 | 994 | NR | 730 | 65 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 85 | NR | 605 | 998 | NR | 735 | 55 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 94 | NR | 610 | 994 | NR | 740 | 47 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 120 | NR | 615 | 973 | NR | 745 | 41 | NR | 875 | 1 | NR | | | |

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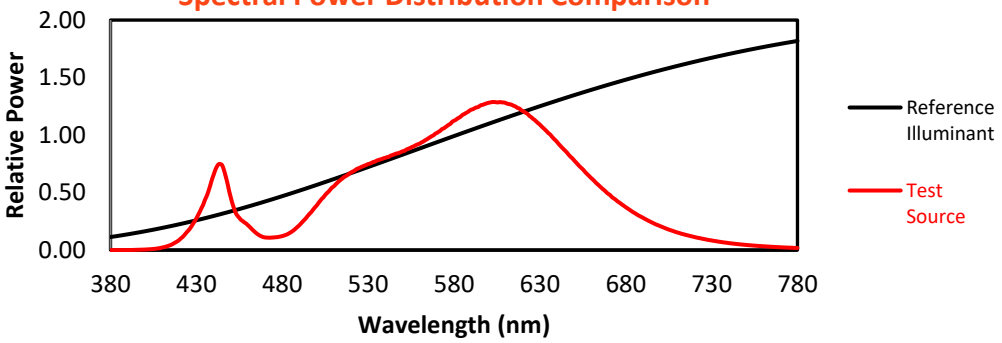
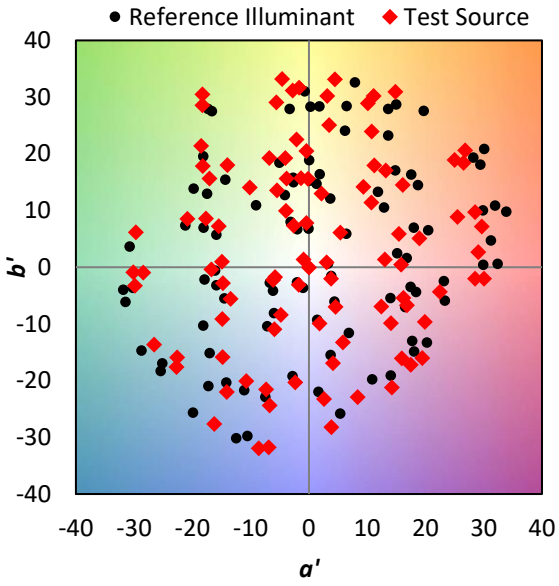
## Summary

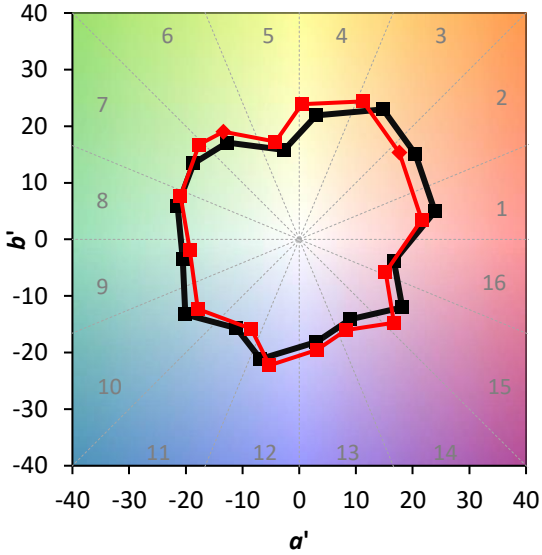
$R_f$ = 81.5
$R_g$ = 99.2
CIE $R_a$ = 81.0
$R_9$ = 7.1

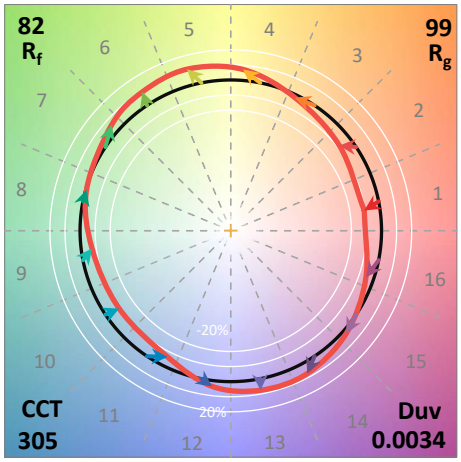
## Spectral Power Distribution Comparison

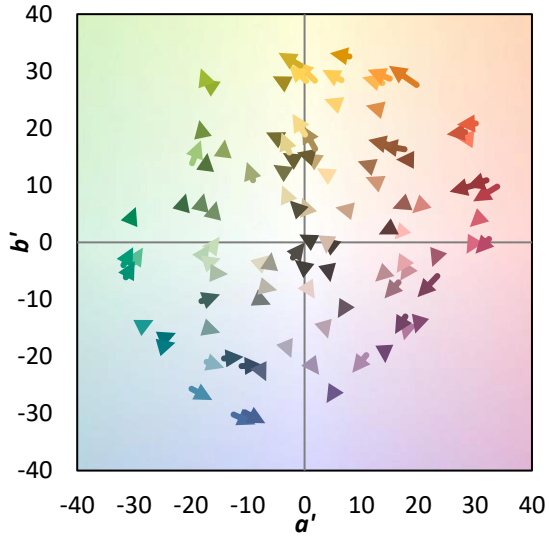



## Color Vector Graphics



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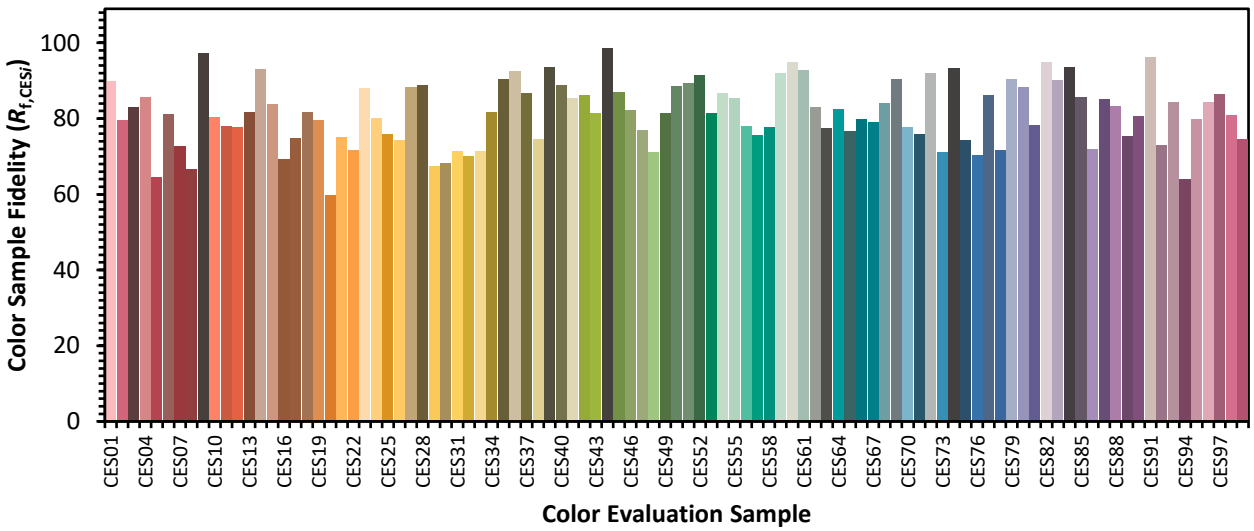
**Individual Sample Fidelity Index ($R_{f,i}$)**

| | | | |
|---|---|---|---|
| CES01 = 86 | CES26 = 74 | CES51 = 89 | CES76 = 70 |
| CES02 = 63 | CES27 = 88 | CES52 = 92 | CES77 = 86 |
| CES03 = 31 | CES28 = 89 | CES53 = 81 | CES78 = 72 |
| CES04 = 70 | CES29 = 67 | CES54 = 87 | CES79 = 90 |
| CES05 = 50 | CES30 = 68 | CES55 = 85 | CES80 = 88 |
| CES06 = 51 | CES31 = 71 | CES56 = 78 | CES81 = 78 |
| CES07 = 42 | CES32 = 70 | CES57 = 76 | CES82 = 95 |
| CES08 = 41 | CES33 = 71 | CES58 = 78 | CES83 = 90 |
| CES09 = 29 | CES34 = 82 | CES59 = 92 | CES84 = 94 |
| CES10 = 76 | CES35 = 90 | CES60 = 95 | CES85 = 86 |
| CES11 = 59 | CES36 = 93 | CES61 = 93 | CES86 = 72 |
| CES12 = 65 | CES37 = 87 | CES62 = 83 | CES87 = 85 |
| CES13 = 43 | CES38 = 75 | CES63 = 77 | CES88 = 83 |
| CES14 = 74 | CES39 = 94 | CES64 = 83 | CES89 = 75 |
| CES15 = 71 | CES40 = 89 | CES65 = 77 | CES90 = 81 |
| CES16 = 47 | CES41 = 85 | CES66 = 80 | CES91 = 96 |
| CES17 = 50 | CES42 = 86 | CES67 = 79 | CES92 = 73 |
| CES18 = 56 | CES43 = 81 | CES68 = 84 | CES93 = 84 |
| CES19 = 72 | CES44 = 99 | CES69 = 91 | CES94 = 64 |
| CES20 = 66 | CES45 = 87 | CES70 = 78 | CES95 = 80 |
| CES21 = 87 | CES46 = 82 | CES71 = 76 | CES96 = 84 |
| CES22 = 79 | CES47 = 77 | CES72 = 92 | CES97 = 87 |
| CES23 = 92 | CES48 = 71 | CES73 = 71 | CES98 = 81 |
| CES24 = 91 | CES49 = 81 | CES74 = 93 | CES99 = 74 |
| CES25 = 72 | CES50 = 89 | CES75 = 74 | |



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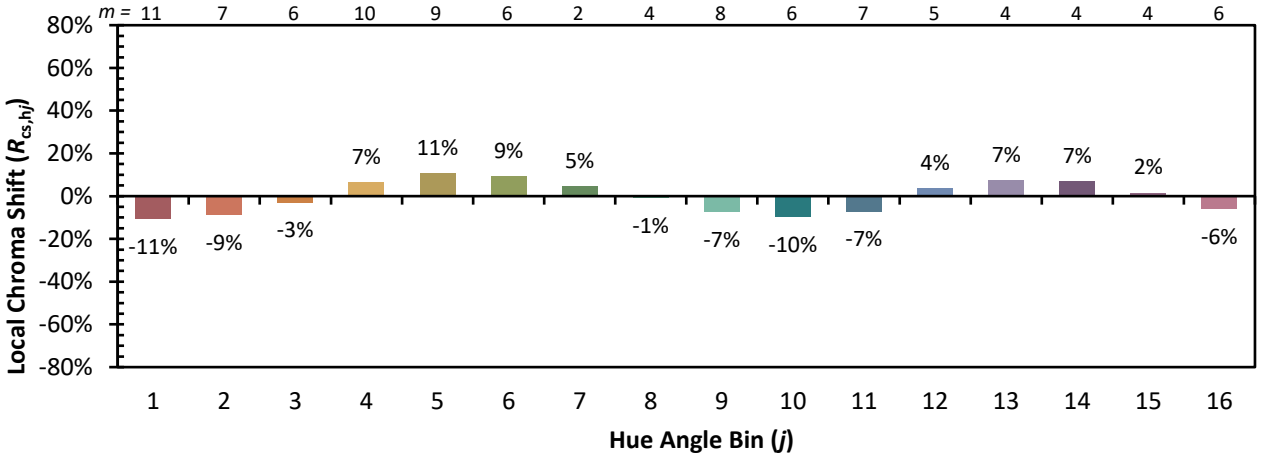
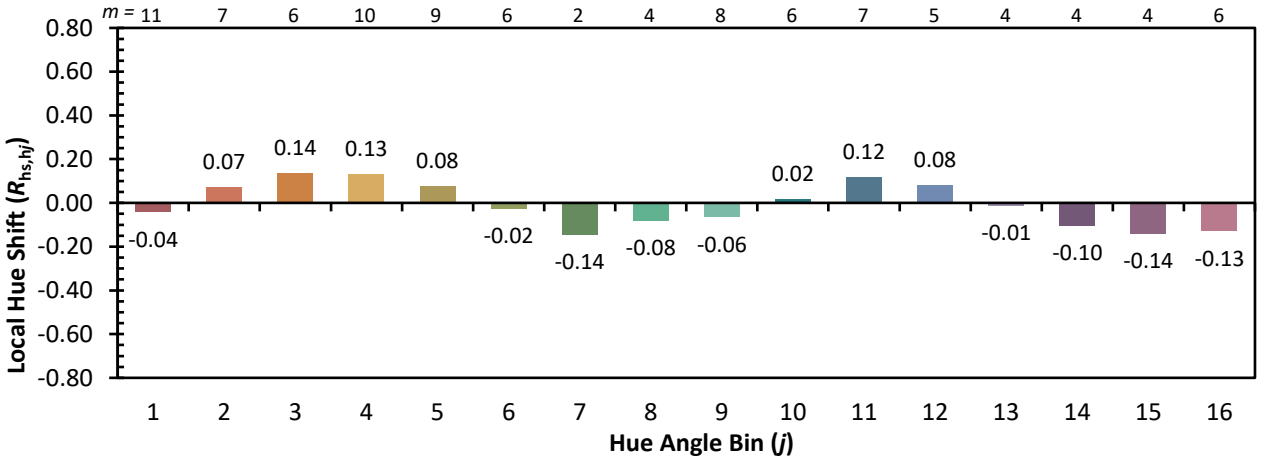
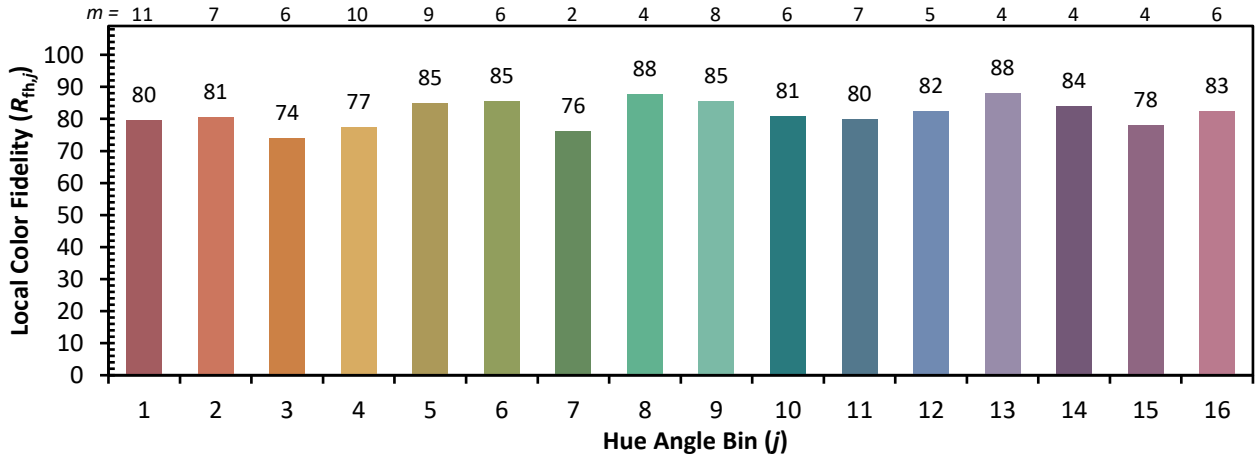
## Color Rendition by Hue-Angle Bin



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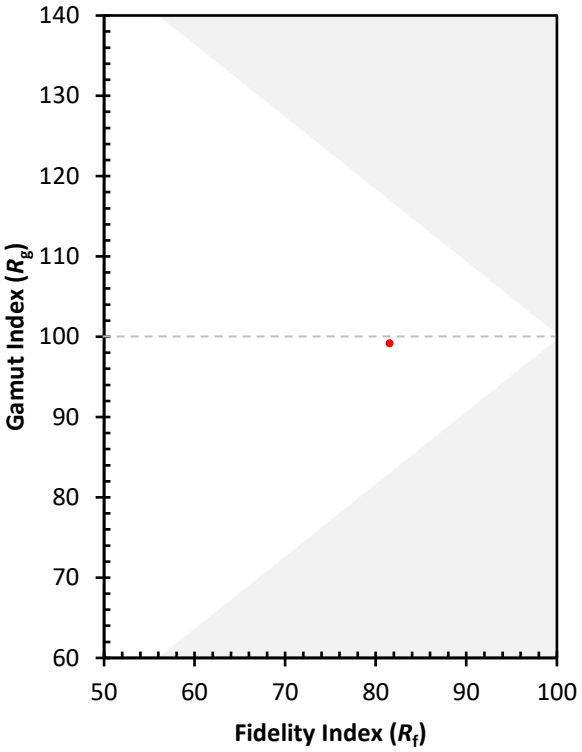
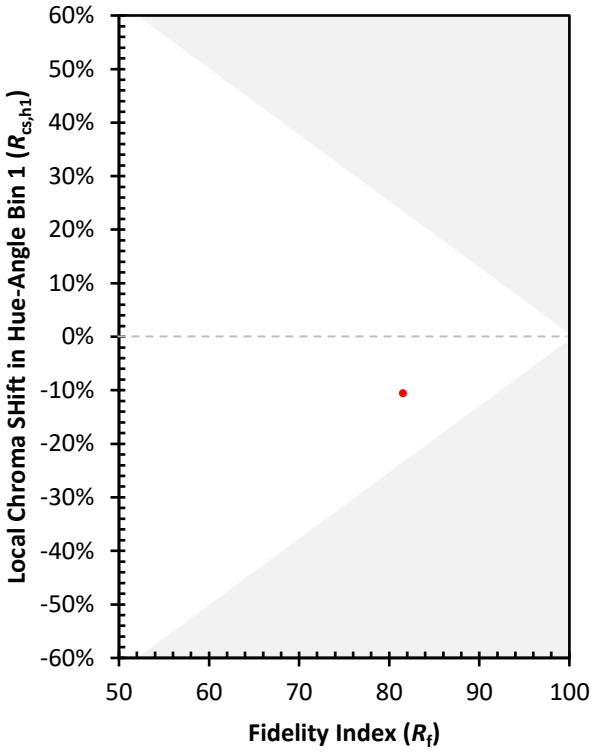
## Measure Comparisons




(END OF REPORT)